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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

SCHNEIDER et al

Atty. Ref.: 1201-45

Serial No. 08/893,371

Group: 1815

Filed: July 15, 1997

Examiner: Hollinden

For: STABLE MICROBUBBLES SUSPENSIONS INJECTABLE INTO LIVING ORGANISMS

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Honorable Commissioner of Patents
and Trademarks
Washington, DC 20231

Sir:

DECLARATION OF MICHEL SCHNEIDER UNDER 37 CFR 1.132

I, MICHEL SCHNEIDER, a citizen of France, hereby declare and state as follows:

That I am an applicant and an inventor in respect of the above-identified application, I am familiar with the contents of that application and I am also familiar with U.S. patents 5,567,413 and 5,536,490 both to Klaveness et al.

That in the specification of the above-identified application the expression used in the first full paragraph of page 15 referring to innocuous physiologically acceptable gases as "CO_2, nitrogen, N_2O, methane, butane, freon, and mixtures thereof" refers to various physiologically acceptable gases forming the suspensions of microbubbles of the invention.

As of April 1990, one of ordinary skill in the art of chemistry would have understood that the word "freon" included fluorinated hydrocarbon gases and perfluorinated hydrocarbon gases,

such as perfluoromethane. The word "freon" originally was a DuPont trademark and therefore, one of ordinary skill in the art of chemistry would look to see how DuPont defined "freons" if that person were seeking a definition of that word. A DuPont Technical bulletin dated 1964, copy attached, defines "freons" as "organic compounds containing one to four carbon atoms and fluorine. Chlorine, bromine, and hydrogen atoms also may be present." Perfluorocarbons in which all of the hydrogen atoms attached to the carbon atoms are replaced with fluorine atoms, such as perfluoromethane, clearly fall within this definition. A 1987 DuPont publication entitled "Freon Fluorocarbons Properties and Applications," copy attached, also defines "freons" as "organic compounds containing one or more carbon atoms and fluorine. Chlorine, bromine and hydrogen atoms also may be present."

As of April 1990, one of skill in the art of chemistry would have understood that the phrase "halogenated hydrocarbons" included fluorinated hydrocarbons wherein the "halogen" was fluorine; fluorine is a halogen.

That as of April 1990, one of ordinary skill in the art would be aware that the fluorinated hydrocarbon gases as exemplified by the "freons" include various fluorine-containing members that would themselves be physiologically acceptable to form stable microbubble suspensions suitable for injection into living organisms for the purposes of echographic imaging and the like as evidenced, for instance, by the toxicity data provided in the attached DuPont "Freon" brochures among other documents available to those skilled in this art. Such gases would include gases which are predominantly fluorinated such as CF_4, $CClF_3$, C_2ClF_5, $C_2Cl_2F_4$, C_3F_8, C_4F_{10}, etc.

SCHNEIDER et al
Serial No. 08/893,371

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: May 7th, 1998

Michel Schneider

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